REMARKS

The present application provides a system for processing or fixing a tissue sample such that the sample retains its histological and pathological structures or characteristics for subsequent examination either by observation in a microscope or by biochemical testing. Claims 70 and 72 through 79 are pending in the application. In this response Claims 70 and 72 to 79 are amended. New claims 92 to 97 are added. Support for the amendments and new claims is found in the claims as originally filed, in Figure 2, at page 15, line 23 through page 16, line 23 and in Example 7 of the specification. Reconsideration of the application in view of the foregoing amendments and the following remarks is respectfully requested.

Response to Amendment:

In the outstanding office action the amendment filed on June 16, 2005, was entered and the rejection under Section 102(b) in view of Stringer et al was withdrawn.

Rejections Under 35 U.S.C. § 102:

In the outstanding office action claims 70, 72, 73, and 75 through 79 are rejected under 35 U.S.C. § 102(b) as anticipated by Delannoy et al., US 5,284,144. This rejection is respectfully traversed as it may be applied to the present claims.

Delannoy discloses an apparatus for hyperthermia treatment of cancer in a human subject. The apparatus or assembly includes a hyperthermia applicator for heating target regions of a subject and an MRI probe which is utilized to monitor temperatures within the heating region. In contrast, the present application teaches a system for processing or fixing tissues that are removed from a subject such that the morphological and molecular features of the tissues are preserved.

The system of the present application comprises the sample to be preserved, an ultrasound transducer controlled by an ultrasound generator and a sensor which are immersed in a reaction chamber containing a solution used to preserve tissues. Ultrasound of a specified frequency and power is applied to the tissue in solution, and is controlled by a central

processing unit (CPU) which is responsive to a sensor. The sensor can alternately monitor tissue parameters such as temperature, sample size, type and density.

Delannoy discloses an apparatus having a hypothermia applicator. The reference suggests that the applicator can transmit heat in the form of ultrasound radiation. It further discloses a radiofrequency coil, which is apparently used to control of the radiant energy transmitted by the applicator. The Delannoy apparatus also includes a microcomputer (CPU) that regulates the output of the hypothermia applicator. The Delannoy apparatus does not contain a reaction chamber in which a tissue sample is positioned relative to a ultrasound transducer and a sensor as taught by the present application. Rather, the Delannoy apparatus is used to treat a living patient.

To anticipate a reference must disclose each element of a claimed invention. Delannoy does not disclose or event suggest a system for fixation and processing of a tissue sample having a reaction chamber containing a solution for fixing a tissue sample. Because Delannoy does not disclose each element of the system of claim 70 as amended, the reference does not anticipate independent claim 70. Likewise, dependent claims 72, 73, 75 to 79 and new claims 92 to 97 are not anticipated by Delannoy. Applicant respectfully asks that the rejection of claims 70, 72, 73 and 75 to 79 be withdrawn.

Claims 70 and 72-79 are newly rejected under 35 U.S.C. §102(b) as being anticipated by U.S. Patent No. 5,639,423, issued to Northrup et al. Northrup et al. disclose an integrated microfabricated instrument for manipulation, reaction and detection of microliter to picoliter samples. The small size of the reaction chambers of the Northrup device are said to facilitate rapid thermal cycling. Northrup further discloses that ultrasonic Lamb-wave devices may be used as sensors, pumps and agitators. Ultrasonic waves are disclosed to be useful for disrupting and exposing cell components through lysis. Northrup does not disclose or even suggest a system in which ultrasound is used to process or fix tissue samples such that they retain their normal histology or pathology, nor does it suggest a system in which an ultrasound generator and a tissue sample are immersed in a solution in a reaction chamber. Because Northrup does not disclose each element of the system of independent claim 70, the reference does not anticipate the claims of the present application. Applicants respectfully ask that the

rejection of claims 70 and 72-79 under 35 U.S.C. §102(b) as anticipated by Northrup et al. be withdrawn.

Conclusion:

In view of the amendments and remarks made above, it is believed that the claims of the present application are in condition for allowance. A timely notice to that effect is respectfully solicited. If additional issues remain which could be resolved in a telephone conference, the examiner is invited to telephone the undersigned to expedite prosecution.

Respectfully submitted,

By 

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